UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,292	09/27/2001	Bret S. Weber	01-221	3852

7590   12/30/2004

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EXAMINER
HOLLAR, ANDREA B

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 12/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Office Action Summary	Application No.	Applicant(s)
		09/965,292	WEBER ET AL.
		Examiner	Art Unit
		Andrea Hollar	2142

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-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 September 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-18</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-18</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>14 February 2002</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include

the following reference character(s) not mentioned in the description: 110, 444, 446, and 448. Corrected

drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the

reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the

Office action to avoid abandonment of the application. Any amended replacement drawing sheet should

include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is

being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header

(as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not

accepted by the examiner, the applicant will be notified and informed of any required corrective action in

the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: item number 146 on page 6,

line 16 is not found in the drawings.

Appropriate correction is required.

The disclosure is objected to because of the following informalities: item number 100 is used to

reference both "SAN" on page 7, line 4 and "SAN fabric" on page 7, line 6. Item numbers should refer to

the same item in all instances.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

Claims 2-4, 6-10, 11-13, and 15-18 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

Claims 3, 4, 8, 9, 12, 13, 17, and 18 recite the limitation "the request". There is insufficient antecedent basis for this limitation in these claims.

The term "similar" in claims 2, 6, 11, and 15 is a relative term which renders the claim indefinite. The term "similar" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

The term "dissimilar" in claims 7 and 16 is a relative term which renders the claim indefinite. The term "dissimilar" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spinney in view of Pettey.

With respect to claim 1, Spinney discloses a method for facilitating communication between computer subnets, the method comprising:

buffers routing external commands to a plurality of devices with an internal subnet (col. 5, lines 1-4, 25-26, and 30-33);

receiving a command from an external subnet to the internal subnet (col. 5, lines 1-3); and

translating the command (col. 5, line 3) and sending the translated command to an internal device, as determined by the buffers (col. 5, lines 30-33);

wherein the internal subnet appears as a single device to the external subnet (This is inherent because when networked devices are arranged into subnets, each subnet automatically appears as though it were a single device to the devices outside of the subnet. (Perlman col. 4, lines 55-60)).

Spinney does not disclose expressly the steps of presetting the buffers and performing the command.

Pettey teaches that registers can be used to initialize (preset) a data element (col. 9, lines 19-21). Pettey also teaches that I/O units such as RAID controllers can be used as nodes on a network (col. 6, lines 31-32, 41-43).

Spinney and Pettey are analogous art because they are both from the same field of endeavor of information transmission through a network.

At the time of invention it would have been obvious to one of ordinary skill in the art to modify Spinney's method by utilizing registers to designate the starting address in memory of each buffer, as taught by Pettey. The motivation for doing so would have been to provide a simple way to allocate the address space for each buffer.

It would also have been obvious to one of ordinary skill in the art at the time of invention to modify Spinney's method to allow link 11 to connect a RAID device to the subnet, as taught by Pettey. The motivation for doing so would have been to extend the functionality of Spinney's method to include networked storage devices.

Therefore, it would have been obvious to combine Pettey with Spinney for the benefit of simplicity of memory allocation and increased functionality to obtain the invention as specified in claim 1.

With respect to claim 2, Spinney further discloses that the external and internal subnets are comprised of similar architectures (col. 2, lines 64-68 – col. 3, line 1).

With respect to claim 3, Spinney does not disclose expressly that the request is a RAID write command.

With respect to claim 4, Spinney does not disclose expressly that the request is a RAID read command.

Pettey teaches that it is known that write and read commands can be issued over a network (col. 1, lines 29-31).

Spinney and Pettey are analogous art because they are both from the same field of endeavor of information transmission through a network.

At the time of invention it would have been obvious to one of ordinary skill in the art that when Spinney's method is modified as described in claim 1, one could further modify the RAID processing component to accept read and write commands, as taught by Pettey.

The motivation for doing so would have been to enable Spinney's method to be able to modify and retrieve the data on the RAID storage device by writing to it or reading from it.

Therefore it would have been obvious to combine Pettey with Spinney for the benefit of modification and retrieval of RAID data to obtain the inventions as specified in claims 3 and 4.

With respect to claim 5, Spinney discloses a method for facilitating communication between computer subnets, the method comprising:

initiating a translation mapping for an internal subnet, wherein the translation mapping associates external command addresses with internal device addresses (col. 7, lines 13-16);

receiving a command from an external subnet to the internal subnet (col. 5, lines 1-3); and

translating the command address (col. 7, lines 13-16) and sending the command to an internal device address, as determined by the translation mapping (col. 5, lines 30-33);

wherein the internal subnet appears as a single device to the external subnet (This is inherent because when networked devices are arranged into subnets, each subnet automatically appears as though it were a single device to the devices outside of the subnet. (Perlman col. 4, lines 55-60)).

Spinney does not expressly disclose the step of performing the command.

Pettey teaches that I/O units such as RAID controllers can be used as processing nodes on a network (col. 6, lines 31-32, 41-43).

Spinney and Pettey are analogous art because they are both from the same field of endeavor of information transmission through a network.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Spinney's method to allow link 11 to connect a RAID device to the subnet, as taught by Pettey. The motivation for doing so would have been to extend the functionality of Spinney's method to include networked storage devices.

Therefore, it would have been obvious to combine Pettey with Spinney for the benefit of increased functionality to obtain the invention as specified in claim 5.

With respect to claim 6, Spinney discloses that the external and internal subnets are comprised of similar architectures (col. 2, lines 64-68 – col. 3, line 1).

With respect to claim 7, Spinney discloses that the external and internal subnets are comprised of dissimilar architectures (col. 2, lines 64-68 – col. 3, line 1).

With respect to claim 8, Spinney does not disclose expressly that the request is a RAID write command.

With respect to claim 9, Spinney does not disclose expressly that the request is a RAID read command.

Pettey teaches that it is known that write and read commands can be issued over a network (col. 1, lines 29-31).

Spinney and Pettey are analogous art because they are both from the same field of endeavor of information transmission through a network.

At the time of invention it would have been obvious to one of ordinary skill in the art that when Spinney's method is modified as described in claim 5, one could further modify the RAID processing component to accept read and write commands, as taught by Pettey.

The motivation for doing so would have been to enable Spinney's method to be able to modify and retrieve the data on the RAID storage device by writing to it or reading from it.

Therefore it would have been obvious to combine Pettey with Spinney for the benefit of modification and retrieval of RAID data to obtain the inventions as specified in claims 8 and 9.

With respect to claim 10, Spinney discloses a system for facilitating communication between computer subnets, the system comprising:

buffers routing external commands to a plurality of devices with an internal subnet (col. 5, lines 1-4, 25-26, and 30-33);

a receiver (col. 5, line 1) for receiving a command from an external subnet to the internal subnet (col. 5, lines 1-3); and

a translating component (col. 5, lines 1 and 30) for translating the command (col. 5, line 3) and sending the translated command to an internal device, as determined by the buffers (col. 5, lines 30-33);

wherein the internal subnet appears as a single device to the external subnet (This is inherent because when networked devices are arranged into subnets, each subnet automatically appears as though it were a single device to the devices outside of the subnet. (Perlman col. 4, lines 55-60)).

Spinney does not disclose expressly a register for presetting the buffers and a processing component for performing the command.

Pettey teaches that registers can be used to initialize (preset) a data element (col. 9, lines 19-21). Pettey also teaches that I/O units such as RAID controllers can be used as nodes on a network (col. 6, lines 31-32, 41-43).

Spinney and Pettey are analogous art because they are both from the same field of endeavor of information transmission through a network.

At the time of invention it would have been obvious to one of ordinary skill in the art to modify Spinney's system by utilizing registers to designate the starting address in memory of each buffer, as taught by Pettey. The motivation for doing so would have been to provide a simple way to allocate the address space for each buffer.

It would also have been obvious to one of ordinary skill in the art at the time of invention to modify Spinney's system to allow link 11 to connect a RAID device to the subnet, as taught by Pettey. The motivation for doing so would have been to extend the functionality of Spinney's system to include networked storage devices.

Therefore, it would have been obvious to combine Pettey with Spinney for the benefit of simplicity of memory allocation and increased functionality to obtain the invention as specified in claim 10.

With respect to claim 11, Spinney further discloses that the external and internal subnets are comprised of similar architectures (col. 2, lines 64-68 – col. 3, line 1).

With respect to claim 12, Spinney does not disclose expressly that the request is a RAID write command.

With respect to claim 13, Spinney does not disclose expressly that the request is a RAID read command.

Pettey teaches that it is known that write and read commands can be issued over a network (col. 1, lines 29-31).

Spinney and Pettey are analogous art because they are both from the same field of endeavor of information transmission through a network.

At the time of invention it would have been obvious to one of ordinary skill in the art that when Spinney's system is modified as described in claim 10, one could further modify the RAID processing component to accept read and write commands, as taught by Pettey.

The motivation for doing so would have been to enable Spinney's system to be able to modify and retrieve the data on the RAID storage device by writing to it or reading from it.

Therefore it would have been obvious to combine Pettey with Spinney for the benefit of modification and retrieval of RAID data to obtain the inventions as specified in claims 12 and 13.

With respect to claim 14, Spinney discloses a system for facilitating communication between computer subnets, the system comprising:

a register for initiating a translation mapping for an internal subnet, wherein the translation mapping associates external command addresses with internal device addresses (col. 3, lines 66-68 – col. 4, lines 1-3; col. 7, lines 13-16);

a receiver (col. 5, line 1) for receiving a command from an external subnet to the internal subnet (col. 5, lines 1-3); and

a translating component (col. 5, lines 1 and 30) for translating the command address (col. 7, lines 13-16) and sending the command to an internal device address, as determined by the translation mapping (col. 5, lines 30-33);

wherein the internal subnet appears as a single device to the external subnet (This is inherent because when networked devices are arranged into subnets, each subnet automatically appears as though it were a single device to the devices outside of the subnet. (Perlman col. 4, lines 55-60)).

Spinney does not expressly disclose a processing component for performing the command.

Pettey teaches that I/O units such as RAID controllers can be used as processing nodes on a network (col. 6, lines 31-32, 41-43).

Spinney and Pettey are analogous art because they are both from the same field of endeavor of information transmission through a network.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Spinney's system to allow link 11 to connect a RAID device to the subnet, as taught by Pettey. The motivation for doing so would have been to extend the functionality of Spinney's system to include networked storage devices.

Therefore, it would have been obvious to combine Pettey with Spinney for the benefit of increased functionality to obtain the invention as specified in claim 14.

With respect to claim 15, Spinney discloses that the external and internal subnets are comprised of similar architectures (col. 2, lines 64-68 – col. 3, line 1).

With respect to claim 16, Spinney discloses that the external and internal subnets are comprised of dissimilar architectures (col. 2, lines 64-68 – col. 3, line 1).

With respect to claim 17, Spinney does not disclose expressly that the request is a RAID write command.

With respect to claim 18, Spinney does not disclose expressly that the request is a RAID read command.

Pettey teaches that it is known that write and read commands can be issued over a network (col. 1, lines 29-31).

Spinney and Pettey are analogous art because they are both from the same field of endeavor of information transmission through a network.

At the time of invention it would have been obvious to one of ordinary skill in the art that when Spinney's system is modified as described in claim 14, one could further modify the RAID processing component to accept read and write commands, as taught by Pettey.

The motivation for doing so would have been to enable Spinney's system to be able to modify and retrieve the data on the RAID storage device by writing to it or reading from it.

Therefore it would have been obvious to combine Pettey with Spinney for the benefit of modification and retrieval of RAID data to obtain the inventions as specified in claims 17 and 18.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea Hollar whose telephone number is (571) 272-5862. The examiner can normally be reached on 8:30-6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack B. Harvey can be reached on (571) 272-3896. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JACK D. HARVEY
SUPERVISORY PATENT EXAMINER

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